

WHAT IS CLAIMED IS:

1. An endoscope system having an imaging unit that images an object of observation while viewing it from a plurality of viewing points, performing image processing and arithmetic operations on image signals that represent images that the imaging unit picks up while viewing the object of observation from the viewing points, and thus achieving stereo measurement, said endoscope system comprising:

a corrected image producing means for adopting one of the images, which are picked up by viewing the object of observation from the plurality of viewing points, as a reference image, regarding the other image as a comparison image, correcting optical distortions in the reference image and comparison image, and thus producing a corrected reference image and a corrected comparison image;

an image displaying means for displaying on a screen at least the reference image or corrected reference image out of the reference image, comparison image, corrected reference image, and corrected comparison image;

a cutting-plane reference line designating means for use in drawing a cutting-plane reference line, which specifies a cutting-plane position that determines a section of the object of observation whose section information should be acquired, in the image displayed on the screen;

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a corresponding point searching means for regarding a point, which lies on the cutting-plane reference line in the corrected reference image, as a point of attention, and searching the corrected reference image for a corresponding point that is associated with the point of attention;

a section information arithmetic means for detecting three coordinates, which represent a point in three-dimensional space whose mapping results in a corresponding point on the cutting-plane reference line according to the principles of trigonometrical measurement, using the position of the point of attention in the corrected reference image and the position of the corresponding point in the corrected comparison image searched for by said corresponding point searching means, and for thus acquiring section information concerning a section of the object of observation determined with the cutting-plane position; and

a section information outputting means for providing section information according to values calculated by said section information arithmetic means.

2. An endoscope system according to Claim 1, wherein the images to be displayed include at least the reference image, and the cutting-plane reference line is drawn in the reference image.

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3. An endoscope system according to Claim 1, wherein the images to be displayed include at least the corrected reference image, and the cutting-plane reference line is drawn in the corrected reference image.

4. An endoscope system according to Claim 1, wherein the cutting-plane reference line is drawn using a pointer that is displayed while being superposed on the reference image.

5. An endoscope system according to Claim 4, wherein once the pointer is used to designate at least one point, the cutting-plane reference line is drawn.

6. An endoscope system according to Claim 1, wherein section information provided by said section information outputting means is a contour line outlining a section.

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